

```

> s benzopyran?(1)cosmet?
    15591 BENZOPYRAN?
    84491 COSMET?
L2      66 BENZOPYRAN?(L)COSMET?

=> s l2 and (protein(1)kinas?)
    2020948 PROTEIN
    302816 KINAS?
    197878 PROTEIN(L)KINAS?
L3      0 L2 AND (PROTEIN(L)KINAS?)

=> s l2 and ((tyrosin?(1)kinase)or tie?)
    170077 TYROSIN?
    293509 KINASE
    52018 TYROSIN?(L)KINASE
    25150 TIE?
L4      0 L2 AND ((TYROSIN?(L)KINASE)OR TIE?)

=> s l2 and (antioxida? or (free(3w)radica?))
    156220 ANTIOXIDA?
    1316794 FREE
    393359 RADICA?
    99195 FREE(3W)RADICA?
L5      9 L2 AND (ANTIOXIDA? OR (FREE(3W)RADICA?))

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=> d bib abs 1-9

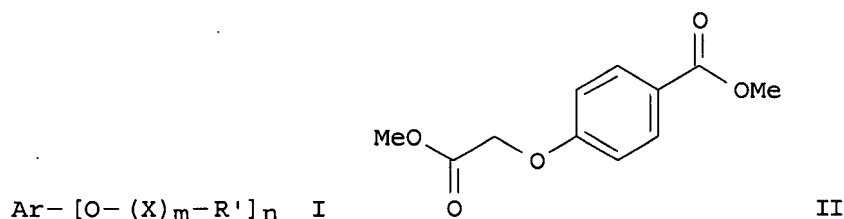
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L5  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
AN  2007:510356  CAPLUS
DN  146:500737
TI  Functionalized phenolic compounds and absorbable polymers thereof and
    their preparation, pharmaceutical, cosmetic, and nutritional compositions,
    and use in implantable medical devices and treatment of diseases
IN  Bezwada, Rao S.
PA  Bezwada Biomedical LLC, USA
SO  PCT Int. Appl., 112pp.
    CODEN: PIXXD2
DT  Patent
LA  English
FAN.CNT 2

```

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007053794	A2	20070510	WO 2006-US60002	20061016
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 2007141113	A1	20070621	US 2007-679191	20070227
PRAI	US 2005-728823P	P	20051021		
	WO 2006-US60002	A2	20061016		
GI					



AB The invention relates to compds. of formula I, which are functionalized phenolic compds., and polymers formed from the same. Compds. of formula I wherein Ar-(O)<sub>n</sub> is phenolic residue; X is CH<sub>2</sub>CO<sub>2</sub>, CH(CH<sub>2</sub>)CO<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CO<sub>2</sub>, (CH<sub>2</sub>)<sub>y</sub>CO<sub>2</sub>, and (CH<sub>2</sub>CH<sub>2</sub>O)<sub>z</sub>CO<sub>2</sub>; y is 2, 3, 4, and 5; z is 6 to 24; R' is H, Bn, and C1-6 alkyl; m is 0, 1, 2, 3, and 4; n is 1 to 10; provides that X is CH<sub>2</sub>CO<sub>2</sub>, CH(CH<sub>3</sub>)CO<sub>2</sub> and (CH<sub>2</sub>)<sub>5</sub>CO<sub>2</sub> when n is 1 and 2, then m is ≥ 2; are claimed. Polymers formed from the functionalized phenolics are expected to have controllable degradation profiles, enabling them to release an active component over a desired time range. The polymers are also expected to be useful in a variety of medical applications. Example compound II was prepared by etherification of Me 4-hydroxybenzoate with Me chloroacetate.

L5 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:837770 CAPLUS

DN 145:471301

TI 2',4'-dihydroxyflavone and derivatives thereof having skin-whitening, wrinkle-reducing, antiinflammatory and antioxidant activity

IN Cho, Young Ho; Kim, Chul Bae; Kim, Jin Hui; Lee, Bum Chun; Lee, Jeong Jae; Park, Sung Min; Pyo, Hyeong Bae

PA Hanbul Cosmetics Co., Ltd., S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DT Patent

LA Korean

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2005030495	A	20050330	KR 2003-67049	20030926
PRAI	KR 2003-67049		20030926		

AB 2',4'-Dihydroxyflavone [i.e., 2-(2,4-dihydroxyphenyl)-4H-1-benzopyran-4-one] and derivs. thereof are provided. These compds. have inhibit tyrosinase activity, formation of melanin and matrix metalloprotease-1 (collagenase). Furthermore, they have antiinflammatory activity, antioxidant activity and they stimulate synthesis of collagen. They also have good stability in water in oil (W/O) or oil in water (O/W) formulations, so that the compds. can be useful for skin whitening and wrinkle-reducing cosmetics. The 2',4'-dihydroxyflavone derivs. are more narrowly defined; specifically mentioned are 2',4',5-trihydroxyflavone, 2',4',7-trihydroxyflavone, 2',4',5,7-tetrahydroxyflavone, 2',4'-dihydroxyflavonol, 2',4',5-trihydroxyflavonol or 2',4',7-trihydroxyflavonol. (no other addnl. information is provided here).

L5 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:299332 CAPLUS

DN 144:350402

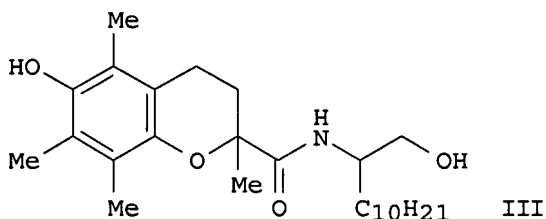
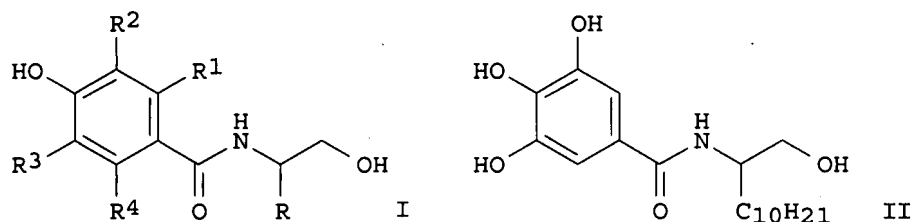
TI Preparation of phenol-amide compounds by amidation of carboxylic acids with 2-aminoalkan-1-ols and their antioxidant properties for preventing biological degradation, and their use in cosmetics and pharmaceuticals

IN Adrian, Guy; Bigot, Patrick

PA Catalys, Fr.

SO Fr. Demande, 10 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2875803	A1	20060331	FR 2004-10098	20040924
	FR 2875803	B1	20061124		
	FR 2875806	A1	20060331	FR 2005-2475	20050314
	FR 2875806	B1	20070209		
	WO 2006035142	A1	20060406	WO 2005-FR2351	20050922
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	FR 2004-10098	A3	20040924		
OS	CASREACT 144:350402; MARPAT 144:350402				
GI					



AB The invention relates to the preparation of compds. of formula I, comprised of a phenol moiety and a amide group derived from a 2-aminoalkan-1-ol, and their antiradical and antioxidant properties in liquid prepn. Similar benzopyran-2-carboxamide derivs. are also disclosed. These liquid mediums containing compds. of formula I can be used as active ingredients of cosmetics or pharmaceuticals to prevent biol. degradation due to free radicals. The compds are designed to retain the activity of the parent antioxidant while exhibiting improved lipid miscibility. Compds. of formula I wherein R<sup>1</sup>-R<sup>4</sup> are independently H, OH, or C1-4 alkyl; R is C2-30 alkyl; and their process for preparation are claimed in this invention. Example compound II was prepared by amidation of gallic acid triacetate with 2-amino-1-dodecanol,

followed by acid hydrolysis with HCl, in 39% yield. The invention compds. were evaluated for their ability to inhibit radicals in vitro. Example compound II inhibited diphenyl(2,4,6-trinitrophenyl)hydrazide radical in ethanol solution, showing a 0.35 absorbance at 517 nm, indicating 70% inhibition (cf. 91% for TROLOX and 71% for Me gallate). Analogous compound III, prepared by amidation of TROLOX with 2-amino-1-dodecanol, gave 65% inhibition.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:510127 CAPLUS

DN 141:59229

TI Combinations of antioxidants containing 6,7-disubstituted  
2,2-dialkylchromanes or -chromenes for cosmetic skin and hair care

IN Yuecel, Sevda; Waldmann-Laue, Marianne

PA Henkel Kommanditgesellschaft Auf Aktien, Germany

SO Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1430882	A2	20040623	EP 2003-28016	20031206
	EP 1430882	A3	20041103		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	DE 10259014	A1	20040624	DE 2002-10259014	20021216
PRAI	DE 2002-10259014	A	20021216		

OS MARPAT 141:59229

AB The invention concerns cosmetic and dermatol. formulations that contain combinations of antioxidants; 6,7-disubstituted 2,2-dialkylchromanes or -chromenes are used with other antioxidants selected from the group of flavonoids, polyphenols, catechins, ubiquinones, pentaerythritol tetrakis[3(3,5-di-tert.-butyl-4-hydroxyphenyl)propionate], urocanic acid, carotenes, ascorbic acid and derivs., isoascorbic acid and derivs., ferulaic acid, ethylferulate, caffeic acid, rosemaric acid, 2,6-di-tert.-butyl-4-methoxyphenol, tert.-butyl-4-methoxyphenol, and plant exts. Thus a formulation contained (weight/weight%): thistle oil 3.0; Myritol PC 3.5; Lanette 22 3.0; Cutina GMS-V 3.0; Stenol 16/18 2.0; isopropylstearate 6.0; Baysilon M350 1.0; Uvinul T150 2.5; polyparaben 0.2; glycerin 5.0; methylparaben 0.2; citric acid 0.1; Lipochroman-6 0.01; sodium ascorbyl phosphate 0.1; Sepigel 305 2.0; water to 100.

L5 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:822203 CAPLUS

DN 140:380237

TI Vitamin-hybrid drug: application of vitamin E/C hybrid drug to cosmetic materials

AU Sakaue, Takahiro; Ogino, Shinya; Iemura, Masahito; Iwasaki, Naoko

CS Lab. for Drug Discovery, Senju Pharmaceutical Co., Ltd., Japan

SO Bihada-Hifu Bogo to Baiogijutsu (2003), 363-367. Editor(s): Miwa, Nobuhiko. Publisher: Shi Emu Shi Shuppan, Tokyo, Japan.

CODEN: 69ERD9; ISBN: 4-88231-408-8

DT Conference; General Review

LA Japanese

AB A review. Characteristics of L-ascorbic acid 2-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-yl-hydrogen phosphate]potassium salt (EPC-K) and 2-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-yl-2-butenedioate]-L-ascorbic acid (CME) having enhanced antioxidative effect and other skin-protective effects for

applications in cosmetic materials are discussed.

L5 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2000:219158 CAPLUS  
DN 132:269841  
TI Chroman and chromene derivatives for the prevention of cell damages caused  
by oxidation or free radicals  
IN Pons Lambiez, Fernando; Delgado Gonzalez, Raquel; Parente Duena, Antonio  
PA Lipotec S. A., Spain  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000095684	A	20000404	JP 1999-260629	19990914
	ES 2154560	A1	20010401	ES 1998-1947	19980916
	ES 2154560	B1	20011201		
	EP 1002533	A1	20000524	EP 1999-500138	19990910
	EP 1002533	B1	20021204		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 228836	T	20021215	AT 1999-500138	19990910
	PT 1002533	T	20030430	PT 1999-500138	19990910
	ES 2189372	T3	20030701	ES 1999-500138	19990910
PRAI	ES 1998-1947	A	19980916		

OS MARPAT 132:269841

AB Topical and oral administration of dimethylchroman derivs. prevents the  
premature aging of cells caused by oxidation or free  
radicals. Liposomes containing 3,4-dihydro-7-methoxy-2,2-dimethyl-2H-  
1-benzopyran-6-ol showed significant inhibitory activities  
against lipid peroxidn. induced by UV-C ray. Cosmetic  
formulations for the protection of skin from UV ray and drink and capsule  
formulations with antiradical activities, are provided.

L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:372017 CAPLUS  
DN 126:343809  
TI Preparation of ascorbic acid tocopheryl phosphate diesters as  
antioxidants  
IN Nakamura, Masayuki; Ogata, Kazumi; Sakaue, Takahiro; Saito, Noriko;  
Iemura, Masahito  
PA Senju Pharmaceutical Co., Ltd., Japan  
SO Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 768314	A1	19970416	EP 1996-116211	19961010
	R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CA 2186654	A1	19970414	CA 1996-2186654	19960927
	US 5750516	A	19980512	US 1996-724509	19960930
	JP 09165394	A	19970624	JP 1996-260831	19961001
PRAI	JP 1995-265615	A	19951013		

AB This invention provides a phosphoric diester of phosphoric acid with  
L-ascorbic acid involving its 5-hydroxyl group and tocopherol involving  
its hydroxyl group or a pharmacol. acceptable salt thereof. The compound of  
the invention can be used with advantage as an antioxidant  
(radical-scavenging) agent and a prophylactic and therapeutic agent for  
ischemic organ disorders or in cosmetics. Thus, pyridine was

added to 2,3-di-O-benzyl-L-ascorbic acid dissolved in THF, followed by tocopheryl phosphorodichloridate in THF; the product was deprotected, isolated, and treated with 1N-KOH to provide L-ascorbic acid  
5-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-yl hydrogen phosphate] K salt. In in vitro autoxidn. tests of homogenized rat brain, this compound showed 98.5% inhibition of lipid peroxidn. at concns. of  $10^{-4}$  M.

L5 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:170754 CAPLUS

DN 124:202021

TI Preparation of dihydrobenzofurans and dihydrobenzopyrans as antioxidants for cosmetics and pharmaceuticals

IN Solladie, Guy; Boeffel, Dominique; Maignan, Jean

PA Oreal S. A., Fr.

SO Eur. Pat. Appl., 27 pp.

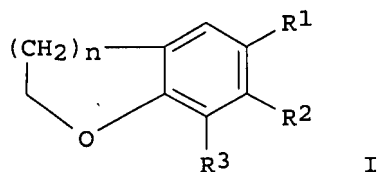
CODEN: EPXXDW

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 685473	A2	19951206	EP 1995-400577	19950315
	EP 685473	A3	19951227		
	EP 685473	B1	19970514		
	R: DE, ES, FR, GB, IT				
	FR 2720395	A1	19951201	FR 1994-6616	19940531
	FR 2720395	B1	19960628		
	ES 2104464	T3	19971001	ES 1995-400577	19950315
	JP 08048677	A	19960220	JP 1995-107595	19950501
	US 5523319	A	19960604	US 1995-454844	19950531
PRAI	FR 1994-6616	A	19940531		
OS	MARPAT 124:202021				
GI					



AB The title compds. I [ $n = 1 - 3$ ;  $R_1 = SR_4$ ,  $OR_4$ ;  $R_4 = \text{alkyl}$ ;  $R_2 = OH$ , etc.;  $R_3 = H$ , alkyl; a proviso is given] are claimed. 2,3-Dihydro-6-hydroxy-5-(methylthio)benzofuran (preparation given) in vitro showed antioxidant activity.

L5 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1994:272637 CAPLUS

DN 120:272637

TI Photochromic plastic containers for cosmetics

IN Watanabe, Morio

PA Nippon Carbide Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05305005	A	19931119	JP 1992-135700	19920430

- PRAI JP 1992-135700

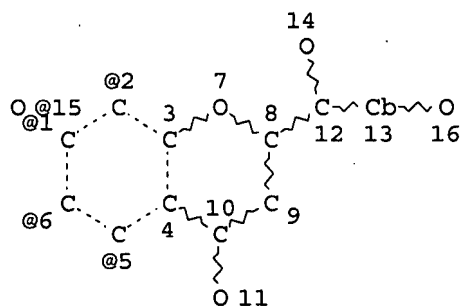
19920430

AB The containers, especially useful for sun cream, oil, and lotion, contain a photochromic substance such that under irradiation from a UV source the containers turn black-brown and then return to their original color without the irradiation. An injection-molded container was prepared from a composition containing polypropylene (J 105G) 100, diazo yellow 0.065,

quinacridone

0.08, TiO<sub>2</sub> 0.5, 1',3',3'-trimethyl-6-nitrospiro(2H-1-benzopyran-2,2'-indoline) 0.05, 1,3,3-trimethylspiro[indolino-2,3'-(3H)naphth[2,1-b][1,4]oxazine] 0.005, and antioxidant 0.01 part and used to store olive oil.

=> d 11  
 L1 HAS NO ANSWERS  
 L1 STR



VPA 15-2/1/6/5 U  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
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STEREO ATTRIBUTES: NONE

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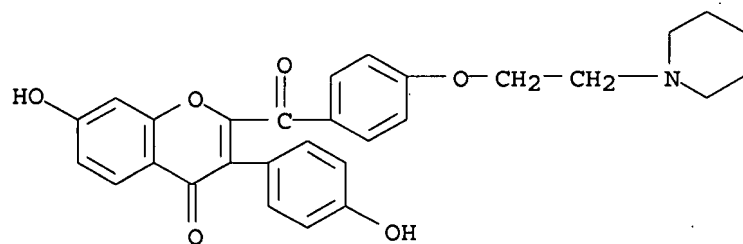
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25 ANSWERS

L7 25 SEA SSS FUL L1

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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-2-[4-[2-(1-piperidinyl)ethoxy]benzoyl]-, hydrochloride (9CI)  
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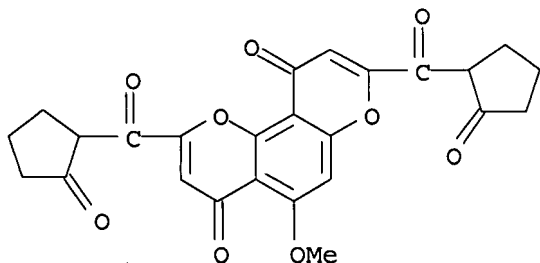


● HCl



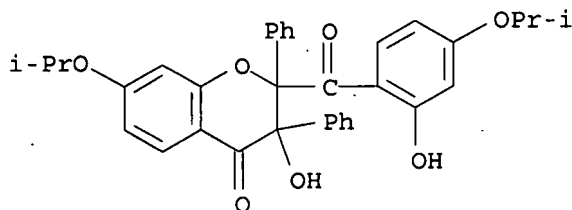
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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 5-methoxy-2,8-bis[(2-oxocyclopentyl)carbonyl]-, disodium salt (9CI)  
MF C25 H20 O9 . 2 Na



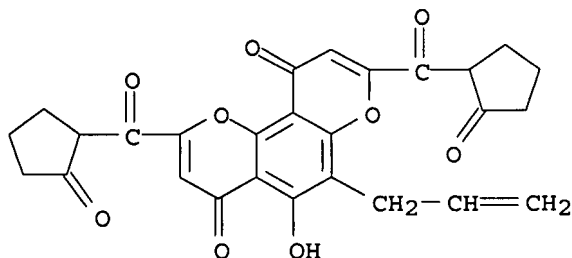
● 2 Na

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H-1-Benzopyran-4-one, 2,3-dihydro-3-hydroxy-2-[2-hydroxy-4-(1-methylethoxy)benzoyl]-7-(1-methylethoxy)-2,3-diphenyl- (9CI)  
MF C34 H32 O7



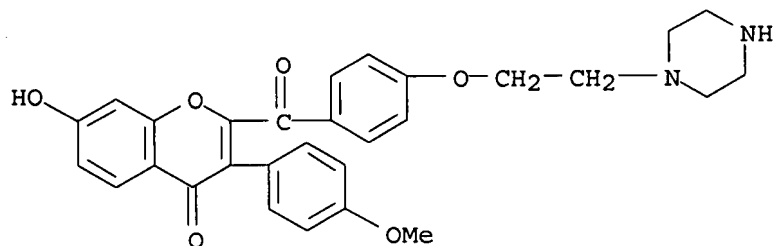
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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 5-hydroxy-2,8-bis[(2-oxocyclopentyl)carbonyl]-6-(2-propenyl)- (9CI)  
MF C27 H22 O9



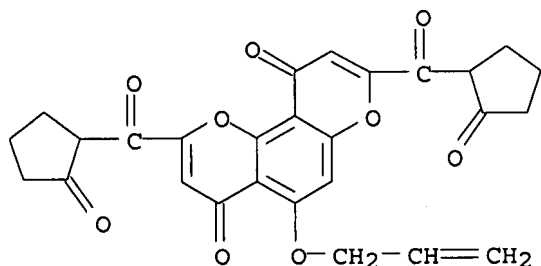
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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-methoxyphenyl)-2-[4-[2-(1-piperazinyl)ethoxy]benzoyl] - (9CI)  
MF C29 H28 N2 O6  
CI COM



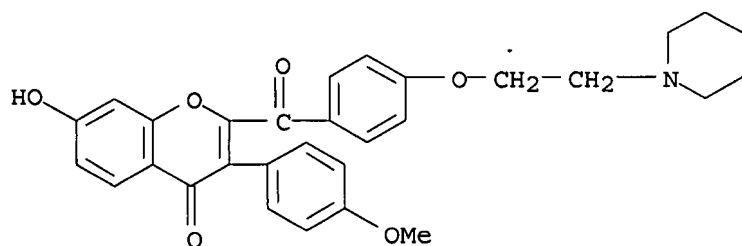
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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 2,8-bis[(2-oxocyclopentyl)carbonyl]-5-(2-propenyloxy) - (9CI)  
MF C27 H22 O9



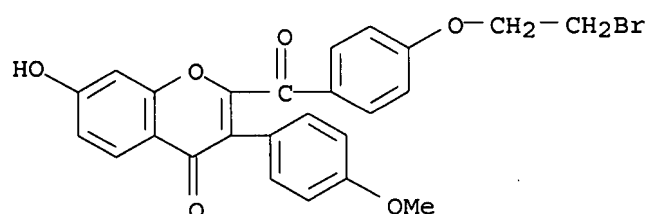
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-methoxyphenyl)-2-[4-[2-(1-piperidinyl)ethoxy]benzoyl] - (9CI)  
MF C30 H29 N O6  
CI COM



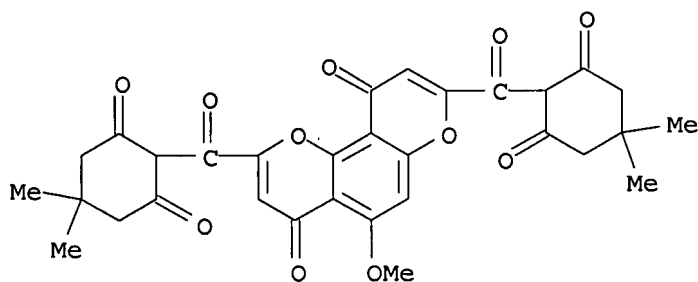
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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
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 MF C25 H19 Br O6



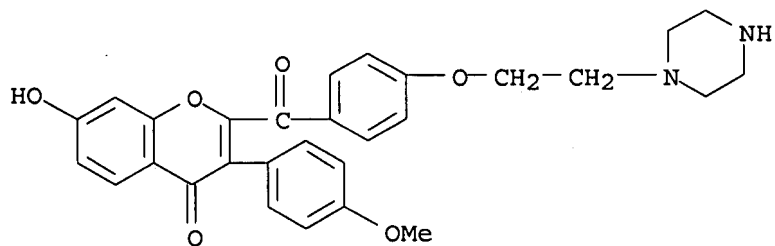
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 2,8-bis[(4,4-dimethyl-2,6-dioxocyclohexyl)carbonyl]-5-methoxy- (9CI)  
 MF C31 H28 O11



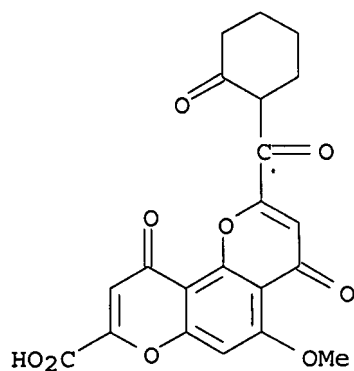
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-methoxyphenyl)-2-[4-[2-(1-piperazinyl)ethoxy]benzoyl]-, dihydrochloride (9CI)  
 MF C29 H28 N2 O6 . 2 Cl H



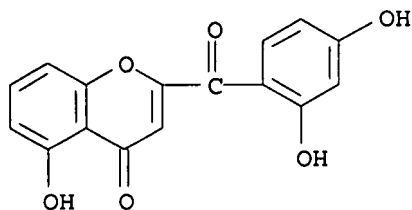
● 2 HCl

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyrans-8-carboxylic acid, 5-methoxy-4,10-dioxo-  
 2-[(2-oxocyclohexyl)carbonyl]- (9CI)  
 MF C21 H16 O9



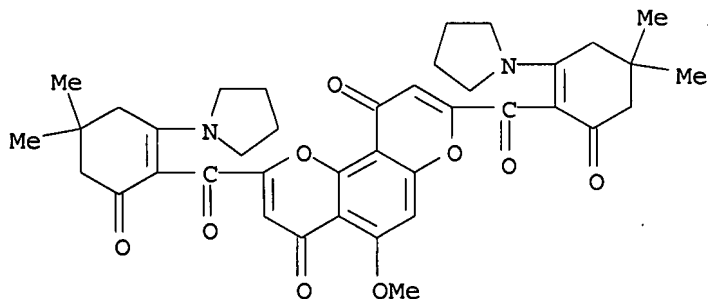
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 2-(2,4-dihydroxybenzoyl)-5-hydroxy- (9CI)  
 MF C16 H10 O6

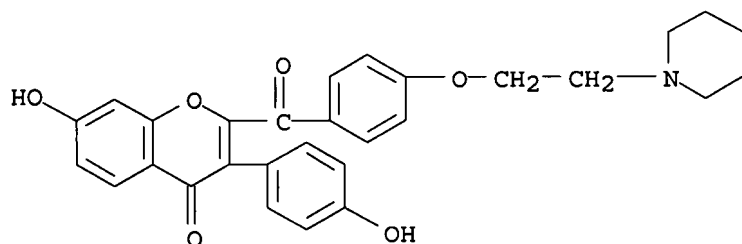


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 2,8-bis[[4,4-dimethyl-6-oxo-2-(1-pyrrolidinyl)-1-cyclohexen-1-yl]carbonyl]-5-methoxy- (9CI)  
 MF C39 H42 N2 O9

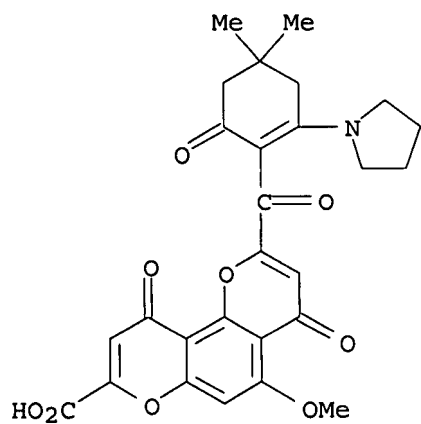


L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-2-[4-[2-(1-piperidinyl)ethoxy]benzoyl]- (9CI)  
 MF C29 H27 N O6  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

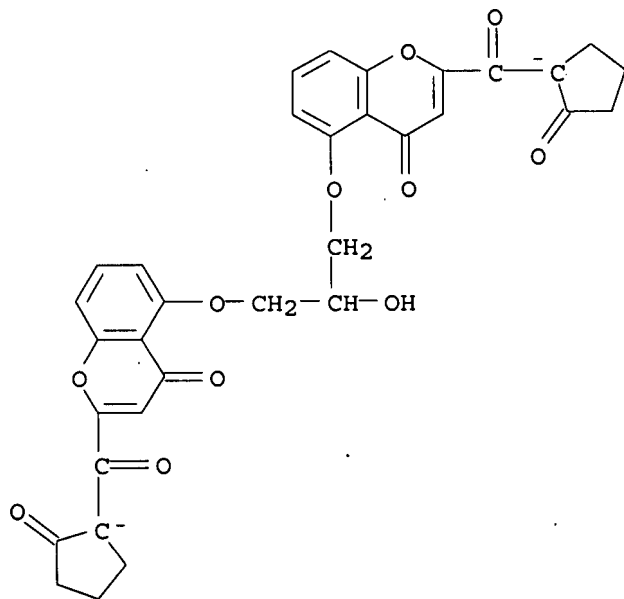
L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-8-carboxylic acid, 2-[[4,4-dimethyl-6-oxo-2-(1-pyrrolidinyl)-1-cyclohexen-1-yl]carbonyl]-5-methoxy-4,10-dioxo-, sodium salt (9CI)  
 MF C27 H25 N O9 . Na



● Na

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[2-[(2-oxocyclopentyl)carbonyl]-, ion(2-), disodium (9CI)  
 MF C33 H26 O11 . 2 Na

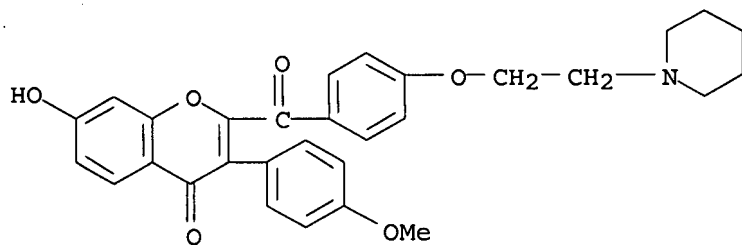
PAGE 1-A



PAGE 2-A

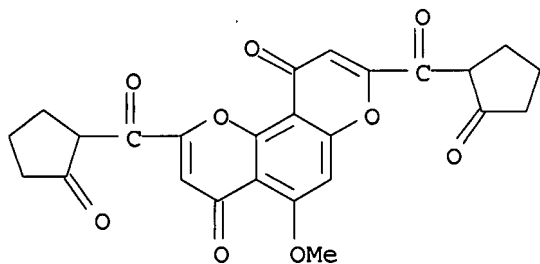
● 2 Na<sup>+</sup>

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-methoxyphenyl)-2-[4-[2-(1-piperidinyl)ethoxy]benzoyl]-, hydrochloride (9CI)  
 MF C30 H29 N O6 . Cl H



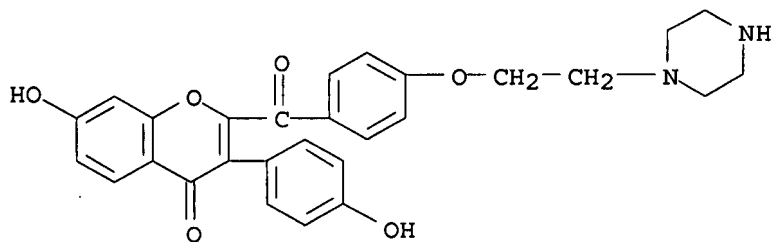
● HCl

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 5-methoxy-2,8-bis[(2-oxocyclopentyl)carbonyl]- (9CI)  
 MF C25 H20 O9  
 CI COM



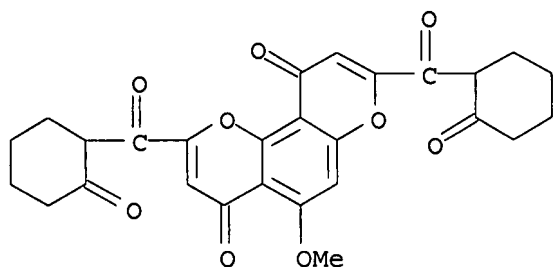
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-2-[4-[2-(1-piperazinyl)ethoxy]benzoyl]-, dihydrochloride (9CI)  
 MF C28 H26 N2 O6 . 2 Cl H



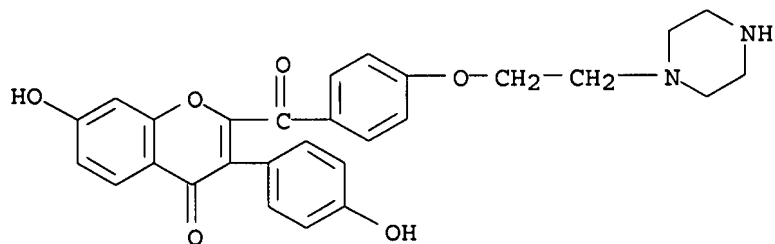
● 2 HCl

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 5-methoxy-2,8-bis[(2-oxocyclohexyl)carbonyl]- (9CI)  
 MF C27 H24 O9



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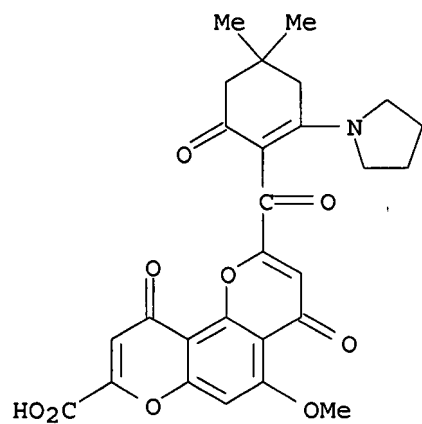
L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-2-[4-[2-(1-piperazinyl)ethoxy]benzoyl]- (9CI)  
 MF C28 H26 N2 O6  
 CI COM



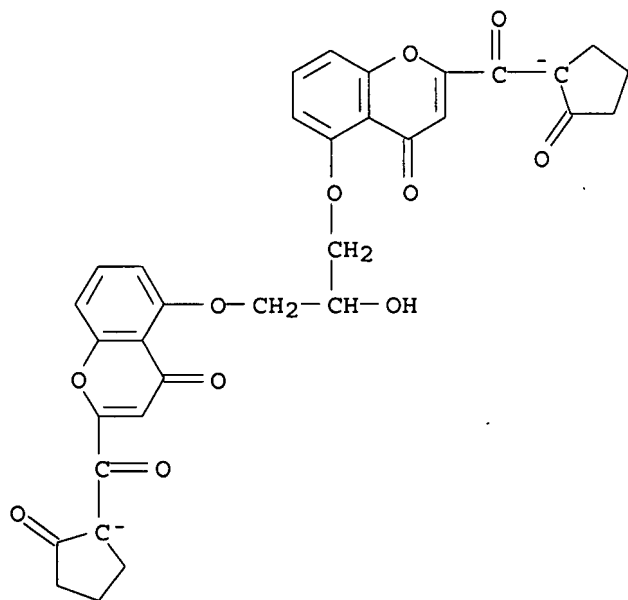
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-8-carboxylic acid, 2-[[4,4-dimethyl-6-oxo-2-(1-pyrrolidinyl)-1-cyclohexen-1-yl]carbonyl]-5-methoxy-4,10-dioxo- (9CI)  
 MF C27 H25 N O9  
 CI COM

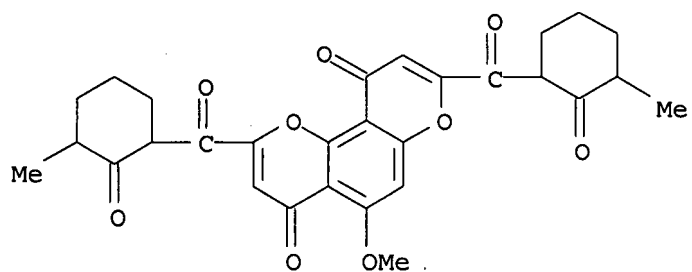




L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[2-[(2-oxocyclopentyl)carbonyl]-, ion(2-) (9CI)  
 MF C33 H26 O11  
 CI COM

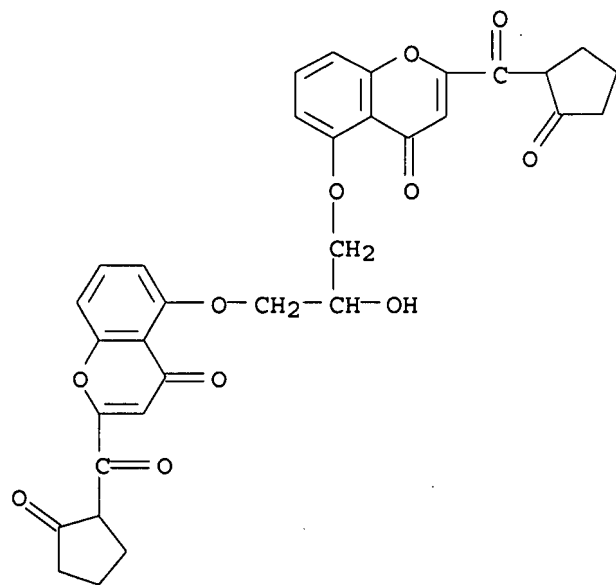


L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H,10H-Benzo[1,2-b:3,4-b']dipyran-4,10-dione, 5-methoxy-2,8-bis[(3-methyl-2-oxocyclohexyl)carbonyl]- (9CI)  
 MF C29 H28 O9



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L7 25 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN  
 IN 4H-1-Benzopyran-4-one, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[2-[(2-oxocyclopentyl)carbonyl]- (9CI)  
 MF C33 H28 O11



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ALL ANSWERS HAVE BEEN SCANNED

=> s C16 H10 O6/mf and l7  
230 C16 H10 O6/MF  
L8 1 C16 H10 O6/MF AND L7

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

5.40

186.38

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L9 1 L8

=> d bib abs hitstr

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:466702 CAPLUS

DN 141:38528

TI Preparation of 2-benzoylchromone derivatives as inhibitors of the tyrosine kinase

IN Mujica-Fernaund, Teresa; Buchholz, Herwig; Carola, Christophe; Sirrenberg, Christian; Rautenberg, Wilfried

PA Merck Patent G.m.b.H., Germany

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 10256174	A1	20040609	DE 2002-10256174	20021202
	EP 1426378	A1	20040609	EP 2003-25849	20031111
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2004176440	A1	20040909	US 2003-725349	20031202
PRAI	DE 2002-10256174	A	20021202		
OS	CASREACT 141:38528; MARPAT 141:38528				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB New compds. I [R = OH, OA, OPh, Ar, OC(:O)A, SO<sub>3</sub>H, SO<sub>3</sub>A, OSO<sub>3</sub>H, OSO<sub>3</sub>A, OSO<sub>2</sub>A, SO<sub>2</sub>A, halogen (F, Cl, I, Br), CO<sub>2</sub>H, CO<sub>2</sub>A, CONH<sub>2</sub>, NHSO<sub>2</sub>A, COA, CHO, SO<sub>2</sub>NH<sub>2</sub>; RR = OCH<sub>2</sub>O, OCH<sub>2</sub>CH<sub>2</sub>O; A = (un)branched C<sub>1</sub>-10-alkyl, C<sub>1</sub>-10-fluoroalkyl; Ar = (un)substituted Ph; X = OH; XX = OCH<sub>2</sub>O, OCH<sub>2</sub>CH<sub>2</sub>O; n = 1 - 4; m = 1 - 5], their pharmaceutically acceptable derivs., solvates and stereoisomers, are inhibitors of the tyrosine kinase and can for the treatment by tumors, to the neuroprotection and for the protection of the stress proteins of the skin is used. The procedure for the preparation of I is characterized by: (a) hydroxyacetophenones II are cyclized with AOC(:O)C(:O)OA (A = C<sub>1</sub>-6-alkyl) to chromones III; (b) hydrolysis of III to acid IV; (c) chlorination to acid chloride V; (d) Friedel-Crafts acylation of PhRm. Thus, 5-Hydroxy-2-(2,4-dihydroxybenzoyl)chromone (VI) was prepared from 2,6-dihydroxyacetophenone via cyclocondensation with (EtO<sub>2</sub>C)<sub>2</sub>, hydrolysis with aqueous HCl in MeCO<sub>2</sub>H, chlorination with with (COCl)<sub>2</sub> in CH<sub>2</sub>Cl<sub>2</sub> containing catalytic DMF, then Friedel-Crafts acylation of resorcinol in THF containing AlCl<sub>3</sub>. Several drug dosage formulations are presented.

IT 700818-24-2P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 2-benzoylchromone derivs. as inhibitors of the tyrosine kinase)

RN 700818-24-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 2-(2,4-dihydroxybenzoyl)-5-hydroxy- (9CI) (CA INDEX NAME)

